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Date: May 8, 2007/Kimberly Webb/

Kimberly Webb

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Applicant(s): Ravisankar V. Pudipeddi, *et al.*

Examiner: Baoquoc N. To

Serial No: 11/700,729

Art Unit: 2162

Filing Date: November 4, 2003

Title: LEGACY FILTER SUPPORT IN A NEW MANAGED FILE SYSTEM FILTER
MODEL

Mail Stop Appeal Brief-Patents
Commissioner for Patents
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REPLY BRIEF

Dear Sir:

Applicants' representative submits this Reply Brief in response to the Examiner's Answer dated April 6, 2007. In the event any additional fees may be due and/or are not covered by the credit card, the Commissioner is authorized to charge such fees to Deposit Account No. 50-1063 [MSFTP530US].

REMARKS

Claims 1 and 3-34 are currently pending and are presently under consideration. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments herein. In particular, the following comments address deficiencies contended in the Examiner's Answer to applicants' Appeal Brief.

I. Rejection of Claims 1 and 3-34 Under 35 U.S.C. §101

Claims 1 and 3-34 stand rejected under 35 U.S.C. §101 because it is alleged the subject claims are not statutory as they to recite a number of computing steps without producing tangible result and/or being limited to practical application within the technological art. Appellant's representative respectfully request the rejection to be withdrawn for at least the following reasons.

In the Examiner's Answer, it is argued that independent claim 1 presents a computer system which does not contain any hardware components. Appellant's representative respectfully disagrees. As put forward in MPEP §2111—Claim interpretation; Broadest reasonable interpretation—, pending claims must be given their broadest reasonable interpretation consistent with the specification. The appellant's specification states that "as used in this application, the terms "component" and "system" are intended to refer to a computer-related entity, either hardware, a combination of hardware and software, software, or software in execution." In view of the latter and Figs. 8 and 9 of the specification and their description, the term "computer system" in independent claim 1 of appellant's claimed invention would be interpreted as including hardware components by one of ordinary skill in the art.

In the Appeal Brief, appellant's representative has argued that independent claims 1, 13, and 29 each produce one or more useful, concrete, and tangible result. And while the Examiner's Answer does not object that independent subject claims 1, 13, and 29 produce useful and concrete results (Examiner's Answer; pages 3 and 4), the Examiner continues to argue that these independent claims "are not statutory because they merely recite a number of computing steps without producing any tangible result and/or being limited to a practical application within the technological arts." (Examiner's Answer; paragraph 3, page 3). Appellant's representative respectfully disagrees.

Tangible result.—As noted in *MPEP*, the tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a 35 U.S.C. 101 judicial exception, in that the process claim must set forth a practical application of that judicial exception to produce a real-world result. *Benson*, 409 U.S. at 71-72, 175 USPQ at 676-77. Independent claims 1, 13, and 29 all produce real-world results generated by a computer and related to a file system in the said computer. Namely, claim 1 recites “a computer system that facilitates management of a file system filter,” and “a filter manager that maps altitudes of the at least one minifilter to legacy filter order groups;” claim 13 recites “loading at least one minifilter to a file system” and “determining an integer altitude value associated with the at least one minifilter;” and claim 29 recites “a computer system that facilitates management of a file system filter” and “mapping altitudes of minifilters to legacy filter order groups” and “determining an altitude interval associated with at least one frame.”

Practical application within the technological arts.—The Examiner continues to contend that 35 U.S.C. §101 requires claims to contain limitations to practical applications in the technological arts (Examiner’s Answer; paragraph 3, page 3). Appellants’ representative disagrees. United States patent law has never supported the application of a “technological aspect” or “technological arts” requirement. Title 35 of the United States Code does not recite, explicitly or implicitly, that inventions must be within the “technological arts” to be patentable. Section 101 of Title 35 recites “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore ...” Accordingly, while an invention must be “new” and “useful,” there is no statutory requirement that it fit within a category of “technological arts.” Moreover, while there has been some judicial discussion of the expression “technological arts” and its relationship to patentability, this dialogue has been limited and its viability questioned. In 1970, the Court in *In re Musgrave*, 431 F.2d 882, 167 USPQ 280 (CCPA 1970) introduced a standard for evaluating process claims under Section 101: any sequence of operational steps is a patentable process so long as it is within the technological arts so as to promote the progress of useful arts. While a few subsequent courts have made reference to this so-called “technological arts” standard, the Supreme Court in *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ 673 (1972)

refused to adopt this standard when it reversed the Court of Customs and Patent Appeals decision in the aforementioned case. Moreover, the Court of Customs and Patent Appeals effectively rejected the technological arts test in *In re Toma*, 575 F.2d 872, 878, 197 USPQ 852, 857 (CCPA 1978), by strongly suggesting that *Musgrave* was never intended to create a technological arts test for patent eligibility:

The language which the examiner has quoted [from *Musgrave* and its progeny relating to “technological arts”] was written in answer to “mental steps” rejections and was not intended to create a generalized definition of statutory subject matter. Moreover, it was not intended to form a basis for a new § 101 rejection as the examiner apparently suggests. *In re Toma*, 575 F.2d at 878, 197 USPQ at 857.

Moreover, the “technological arts” consideration is completely devoid from recent Federal Circuit cases like *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, (Fed. Cir. 1999), and *State Street Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed.Cir.1998).

It is submitted that the “technological arts” requirement propounded by *Musgrave* should be confined to its facts and holding, *i.e.*, that the computer-related invention in dispute was a patentable invention within the meaning of Section 101 because it was an advancement in technology which clearly promoted the useful arts. Thus, the decision in *Musgrave* should not be construed as a “technological arts” requirement for patentability, but rather as a proposition that computer-implemented process claims might be patentable subject matter.

Further, in *Ex parte Lundgren*, Appeal No. 2003-2088, Application 08/093,516, (Precedential BPAI opinion September 2005), the Board rejected the Examiner’s argument that *Musgrave* and *Toma* created a technological arts test. “We do not believe the court could have been any clearer in rejecting the theory the present examiner now advances in this case.” *Lundgren*, at 8. The Board held that “there is currently no judicially recognized separate ‘technological arts’ test to determine patent eligible subject matter under § 101.” *Lundgren*, at 9. Thus, in view of the foregoing it is evident that there are no recognized exceptions to eligible subject matter other than laws of nature, natural phenomena, and abstract ideas.

In view of at least the foregoing, it is apparent that appellants’ claimed invention produces a useful, concrete and tangible result pursuant to *AT&T Corp. v. Excel*

Communications, Inc., and the Examiner's contention that the subject claims must be limited to a practical application within the technological arts lacks support from either 35 U.S.C. §101 or the Federal Courts' precedential interpretation thereof. Accordingly, reversal of this rejection with respect to independent claims 1, 13, and 29 (and claims that depend there from) is requested.

II. **Rejection of claims 1 and 3-34 Under 35 U.S.C. §102(e)**

Claims 1 and 3-34 stand rejected under 35 U.S.C. §102(e) as being anticipated by Golds *et al.* (US2001/0020245). For reasons discussed below, appellant's representative respectfully disagrees that Golds *et al.* invention anticipates the claimed invention, and respectfully requests that the rejection be withdrawn.

For a prior art reference to anticipate, 35 U.S.C. §102 requires that "***each and every element*** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (quoting *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)) (emphasis added).

Among the distinguishing elements between appellant's claimed invention and Golds *et al.* invention are the following. (i) The appellant's claimed invention permits filter managers to insert newer "minifilters" between other filters to create a new filter framework. Working within a legacy filter frame work, minifilters can be moved as desired. Moreover, minifilters can dynamically change their own position as desired, and as such advantageously enhances the ability of a filter manager to sort incoming requests. To this end, independent claim 1 (and similarly, independent claims 13 and 29) recites: at least one minifilter that has an integer altitude value associated therewith. Golds *et al.* fails to disclose or suggest this aspect of the invention as claimed.

(ii) Golds *et al.* discloses a system and method for ordering software modules in a guaranteed order for execution wherein unique ordering values are statically assigned to software modules. Even when Golds *et al.* system is viewed with reference to filter drivers in a filter stack—a view that appears to be adopted by the Examiner—the system is clearly

distinguishable from the appellant's claimed invention. Besides the static nature of the unique ordering values assigned to the filter drivers, the manner in which the unique ordering values are assigned in Golds *et al.* invention is clearly different. Namely, filter drivers are first grouped into classes according to their functionality, and then assigned unique ordering floating-point values in a range that is based on its class type. Specifically, the ordering value takes the form of 0.ABBB, where the first character identified by "A" is employed to define a general class or family of driver types, and the characters "BBB" are utilized to order individual drivers within the general class of driver types. Golds *et al.* selected a floating-point representation for the ordering number in order to be able to introduce newer filter drivers in the filter stack (paragraph 0036, page 4), using the fact that a floating-point representation affords a large (infinite, actually, in the idealized case of an arbitrary precision floating-point representation) number of possibilities to include newer filters via the increase in the precision of the floating point representation. Appellant's claimed subject matter in contrast, employs and assigns integer values to facilitate ordering of file systems and file system filters, rather than assigning floating point values to filter drivers.

The Examiner contends that the distinguishing feature (ii) above is actually not distinguishing because "The float point values include the integer values." (Examiner's Answer; page 14, second paragraph) However, this is misleading. And an artisan of ordinary skill in the art would realize that the Examiner's argument *does not lead* to the appellant's claimed invention being undistinguishable from that of Golds *et al.* because in a computer, where integer numbers and floating-point numbers are represented and processed differently. An integer, as would be comprehended by those cognizant in the art, is a whole number (a number that is neither a fraction nor a mixed fraction). A floating-point number in contrast is not an integer; instead, it is a representation of real numbers with fractional parts to them. In addition and as an illustration, due to representation properties, a computation performed by executing a program that assigns variable types at compile-time would indicate that 0 is the answer to the operation that divides the *integer* values 2 and 3, *i.e.*, $2/3$, but the same computer executing the same program would deliver 0.6 as the answer to $2.0/3.0$. Therefore, the invention of Golds *et al.* is distinguishable from the appellant's claimed invention, and does not anticipate each and every element as set forth in independent claims 1, 13, and 29 in the appellant's claimed invention, which recite *an integer altitude value*.

Additionally, the standard by which anticipation is to be measured is *strict identity* between the cited document and the subject matter as claimed, not mere equivalence or similarity. *See, Richardson* at 9 USPQ2d 1913, 1920. This means that in order to establish anticipation under 35 U.S.C. §102, the single document cited must not only expressly or inherently describe each and every limitation set forth in the patent claim, but also the identical invention must be shown in as complete detail as is contained in the claim. The fact that Golds *et al.* fails to employ and assign integer values to facilitate ordering of file systems and file system filters, but rather assigns floating-point values to software modules would lead one of ordinary skill to the belief that the cited document in the final analysis, does not provide an invention identical to that recited in the subject claims.

In view of at least the foregoing, rejection with respect to independent claims 1, 13 and 29, and associated dependent claims, should be withdrawn.

III. Conclusion

The subject application is believed to be in condition for allowance in view of the above comments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP530US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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